

WHAT IS CLAIMED IS:

1 A system for powering a fiber optic communication network
2 which transmits communication data between a telephone company central office and
3 a remote user device, the system comprising:

4 a digital subscriber line access multiplexer for converting the
5 communication data from a digital optical state to a digital electrical state;

6 a fiber optic communication medium configured to transfer the
7 communication data between the telephone central office and the digital subscriber
8 line access multiplexer;

9 a power source configured to supply an electrical supply voltage to
10 power the digital subscriber line access multiplexer, the power source having an AC
11 power feed for providing power to the digital subscriber line access multiplexer and
12 a DC power feed for providing power to the digital subscriber line access multiplexer
13 when the AC power feed is not supplying power to the digital subscriber line access
14 multiplexer; and

15 an electrical conducting medium configured to conduct the electrical
16 supply voltage and the communication data from the digital subscriber line access
17 multiplexer to a network interface device in electrical communication with the
18 remote user device.

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20 2. The system of claim 1, further comprising a serving area
21 interface configured to provide an access point to connect a plurality of
22 communication signals from the digital subscriber line access multiplexer to the
23 electrical conducting medium.

24 3. The system of claim 1, further comprising a digital loop carrier
25 for providing a plurality of digital communication data to the digital subscriber line
26 access multiplexer.

27 Sub 4. The system of claim 1, wherein the power source is located
28 proximate to the digital subscriber line access multiplexer.
29

30 5. The system of claim 1, wherein the power source is remote
31 from the digital subscriber line access multiplexer and supplies power to a plurality
32 of digital subscriber line access multiplexers.

33 6. The system of claim 1, wherein the power source is located
34 proximate to the telephone company central office.

1 7. The system of claim 1, wherein the power source is located
2 proximate to a digital loop carrier.

3 8. The system of claim 1, wherein the remote user device is a
4 telephone.

5 9. The system of claim 1, wherein the remote user device is a
6 computer.

7 10. The system of claim 1, wherein the remote user device is a
8 television.

9 11. The system of claim 1, wherein the power source comprises a
10 plurality of rectifiers, a plurality of converters, a plurality of current limiters, and
11 a plurality of batteries configured to a supply DC voltage to the digital subscriber
12 line access multiplexer.
13

14 12. The system of claim 1, wherein the power source comprises
15 an alarm system configured to monitor the operation of the power source and relay
16 operation information to the telephone company central office.

17 13. The system of claim 9, further comprising a plurality of
18 conducting mediums configured to connect the alarm system in the power source to
19 the digital subscriber line access multiplexer for relaying power source operation
20 information to the telephone company central office.
21

22 M. A method for powering a fiber optic communication network
23 which transmits communication data between a telephone company central office and
24 a user device, the method comprising:
25 converting communication data from an optical state to an electrical
26 state using a digital subscriber line access multiplexer;
27 transferring the communication data between the telephone central
28 office and the digital subscriber line access multiplexer;
29 transmitting an electrical supply voltage from a power source
30 configured to supply an electrical supply voltage to power the digital subscriber line
31 access multiplexer, the power source having an AC power feed for providing power
32 to the digital subscriber line access multiplexer and a DC power feed for providing
33 power to the digital subscriber line access multiplexer when the AC power feed is
34 not supplying power to the digital subscriber line access multiplexer to the digital
35 subscriber line access multiplexer; and
36 conducting the electrical supply voltage and the communication data
37 from the digital subscriber line access multiplexer to a network interface device in
38 electrical communication with the remote user device.
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